

WHAT IS CLAIMED:

1. A circuit interrupting device having a detection circuit, at least one pair of load terminals and at least one pair of line terminals, the circuit interrupting device comprises:

5 a switch and timer circuit coupled to the line terminals so as to allow a sufficient amount of leakage current to flow for a sufficient amount of time to trip the circuit interrupting device when such device is reverse wired.

2. The device of claim 1 wherein the switch of the switch and timer circuit is coupled to connect the neutral leg on the line side to a ground terminal to cause a leakage
10 current to flow to trip the device if the device is reverse wired.

3. The device of claim 1 wherein the switch of the switch and timer circuit is coupled to connect the neutral leg on the line side to a ground terminal to cause a leakage current to flow which does not trip the device if it is not reverse wired.

4. The device of claim 2 wherein the device is self tripped if reverse wired
15 upon the application of power .

5. The device of claim 2 wherein the switch of the switch and timer circuit is initially conditioned to be closed for an interval of time that is greater than .3 seconds and less than 20 seconds.

6. The device of claim 5 wherein the interval of time is greater than .5
20 seconds and less than 15 seconds.

7. The device of claim 5 wherein the interval of time is greater than .5 seconds and less than 10 seconds.

8. The device of claim 5 wherein the interval of time is greater than .5 seconds and less than 7 seconds.

9. The device of claim 5 wherein the interval of time is greater than 2 seconds and less than 7 seconds.

10. The device of claim 1 wherein the timer of the switch and timer is coupled to receive power from the phase leg of the device.

5 11. The device of claim 10 wherein the timer is coupled to close the switch for a defined interval of time when the device is not reverse wired.

12. The device of claim 11 wherein the timer operates to open the switch prior to the defined interval of time when the device is reverse wired.

10 13. The device of claim 11 wherein the timer operates to close the switch one time when power is first applied after an off time.